UNITED STATES TOWER SERVICES LTD.

Corporate Capabilities and Experience

INTRODUCTION

United States Tower Services, Ltd. (USTS) is a small business with over thirty years' experience in erecting and servicing radio towers and antennas. Though small, we are a recognized leader in the industry. Our customers include commercial broadcasters, the military services, public safety and government entities, satellite earth station users, transportation companies, and common carriers. In 1989 we moved into our present 14,000 square foot facility on a four-acre tract in Frederick, Maryland.

We have built towers in the United States from Maine to California and overseas. We have built them on the ground and on rooftops, on mountaintops and in swamps, and can handle heights in excess of 1000 feet.

We have experience in all aspects of antenna siting, design, fabrication, erection, test, and checkout, including siting, design, and installation of U.S. Navy shore communications and other Department of Defense systems at a wide variety of locations. Our crews have worked in locations ranging from the dense, tropical jungles of Panama to the frozen tundra of Alaska to the Everglades Swamp in Florida; and from the Great Dismal Swamp in Virginia/North Carolina to the coastal regions of San Francisco Bay. Our personnel have also worked directly or indirectly for the military services overseas in Italy, Spain, Scotland, Guam, and other sites. We have also been involved in electromagnetic interference and radio frequency interference surveys and have provided solutions to EMI/RFI problems at a variety of military installations.

Safety is a constant concern of USTS. Not only do we subscribe to and follow all applicable rules, regulations and advisories of the Federal Occupational Safety and Health Administration, Departments of Commerce and Labor, and the Federal Highway Administration; but we have actively been working for some time, in cooperation with the Federal Communications Commission, to improve the electromagnetic radiation standards and compliance practices for tower personnel safety. Our company safety officer constantly monitors safety practices and procedures. USTS is an active and supporting charter member of the National Association of Tower Erectors (NATE). Our Director of Operations serves as Chairman of the NATE Safety Committee and works closely with Federal and State OSHA departments in developing workable safety standards for our industry.

TECHNICAL EXCELLENCE

USTS personnel with a broad mix of talents and experience, provide an unusually broad base of expertise for designing, installing, deinstalling and maintaining antennas of almost every conceivable type. We have extensive experience with medium and high frequency fixed and rotatable antennas, including dipoles, log periodics, conicals and biconicals, vertical and conical monopoles, fans and curtains. We have built and installed AM and FM radio and television broadcast antennas. We have also built, installed, aligned and serviced a wide variety of large and small microwave antennas, including tropospheric, satellite and point-to-point link dish antennas. We have restored antennas and towers from severely deteriorated condition to a fully functioning and operational system. We have the capability to make mechanical, electrical and structural repairs to both towers and antennas.

USTS personnel are certified and experienced in the installation, maintenance and repair of all common tower lighting systems. USTS is an authorized agent and maintenance/repair representative for several manufacturers.

SUPPORT CAPABILITIES

Computer graphics capabilities at USTS include the ability to present small-scale drawings of towers, in two-dimension and/or three dimension perspectives, with various antennas shown as mounted. USTS furthermore has the capability to maintain libraries of customers tower configurations, and provide updated drawings when antennas, side arms, and other appurtenances are moved, replaced or rearranged on the towers.

Equipment and material storage are presently provided at our warehouse facility (8,000 square feet of indoor storage) and our equipment yard facility (3 acres of outdoor storage) in Frederick, MD.

Antenna and transmission line testing, as well as system testing, are performed in-house at USTS or in the field, at the customers site. USTS technicians use swept frequency scalar network analysis techniques. Individual components can be examined, as well as complete systems. This enables problems to be isolated and system performance to be verified, often eliminating needless repairs, component replacements, and more costly service calls. Repair and refurbishment of antennas and towers are performed either in-house, or by the manufacturer of the antenna or tower or outside commercial vendors, depending on the scope of the particular item of work.

Time domain reflectometry enables USTS technicians to use pulse techniques to test coaxial cables before, during or after installation, in laboratory, production, assembly and field situations, and to provide a visual display of cable faults.

Specialized support in antenna design, construction and environmental considerations are generally provided from in-house USTS resources. For those tasks beyond our own capabilities, expertise is then obtained from antenna and tower manufacturers, including Rohn, Andrew Corporation, Pirod Corporation and Telex/Hy-Gain. Several professional A&E firms work in partnership with USTS for consultation, review and sealed approval of plans and engineering documents.